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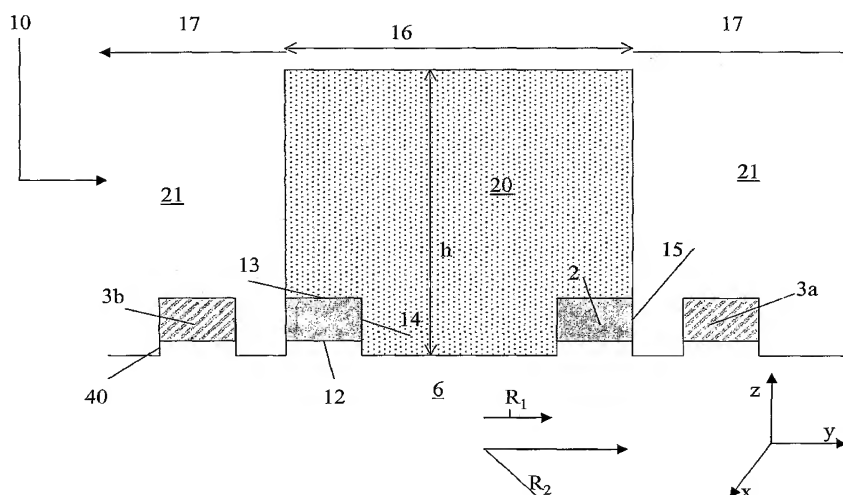
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(54) Title: LOW LOSS MICRORING RESONATOR DEVICE



(57) Abstract: It is disclosed a low loss micro-ring resonator device (10; 100; 10') which comprises a closed-loop resonator waveguide (2) having a first refractive index (n_r), the resonator waveguide (2) defining an inner (16) and an outer region (17) by an outer curved edge (15) of the waveguide (2). The resonator waveguide is arranged on a substrate (6; 6') having a second refractive index (n_b), the refractive index difference (Δn_1) between the first refractive index (n_r) and the second refractive index (n_b) is greater than 0.3. The device (10) also comprises an upper cladding (20) covering the inner region (16) of the resonator waveguide (2) having a third refractive index (n_{uc}); and a lateral cladding (21) in contact with the outer curved edge (15) and extending in the outer region (17), said lateral cladding (21) having a fourth refractive index (n_{lc}), the fourth refractive index (n_{lc}) being lower than said third refractive index (n_{uc}). A method for reducing propagation losses of a resonator device (10; 100; 10') is also described.

WO 2005/064375 A1



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